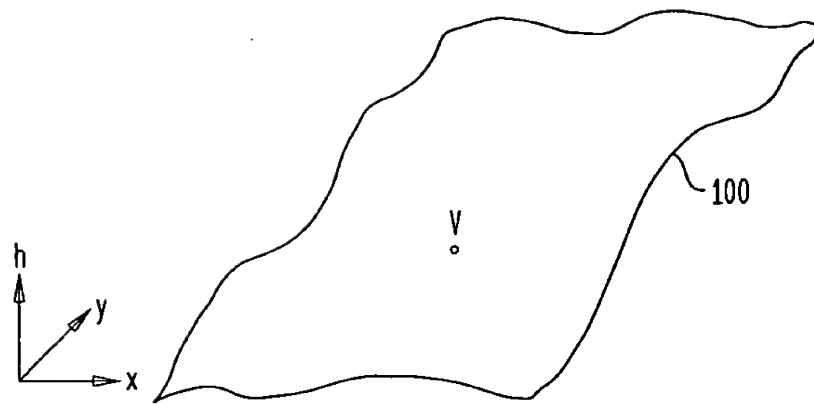


FIG. 1



EXAMPLE OF A TERRAIN DEFINED BY A HEIGHT FIELD

FIG. 2

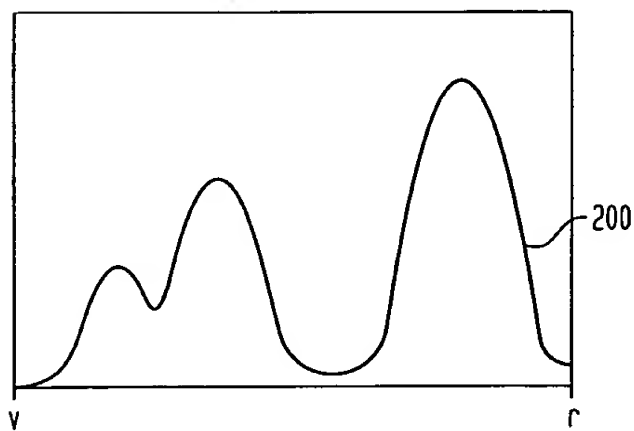
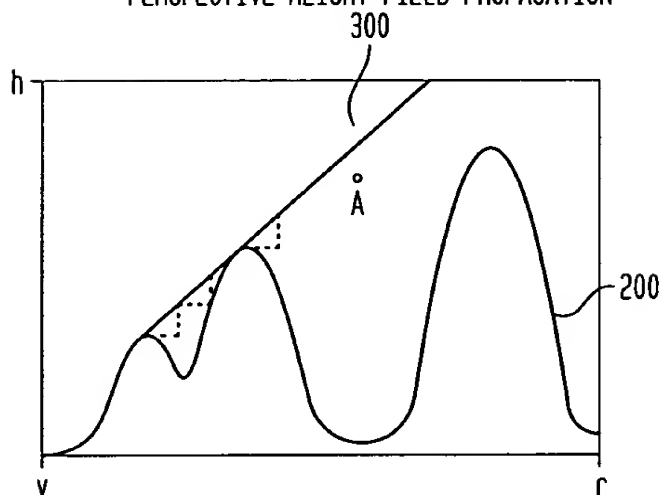


FIG. 3A

OCCLUSION HEIGHT FIELD GENERATED BY
PERSPECTIVE HEIGHT FIELD PROPAGATION

**FIG. 3B**

OCCLUSION HEIGHT FIELD GENERATED BY
ORTHOGRAPHIC HEIGHT PROPAGATION

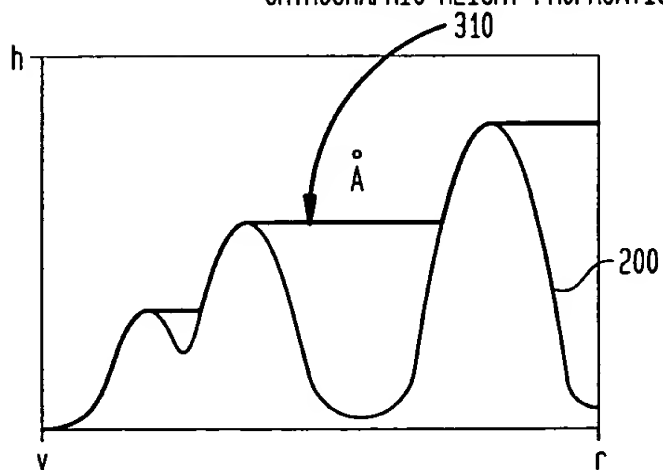


FIG. 4

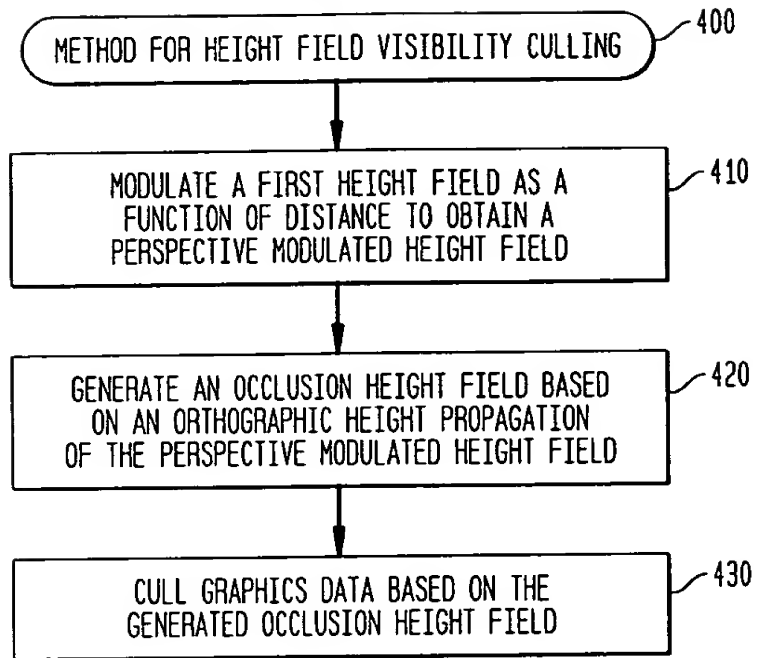


FIG. 5

ARCHITECTURE 500

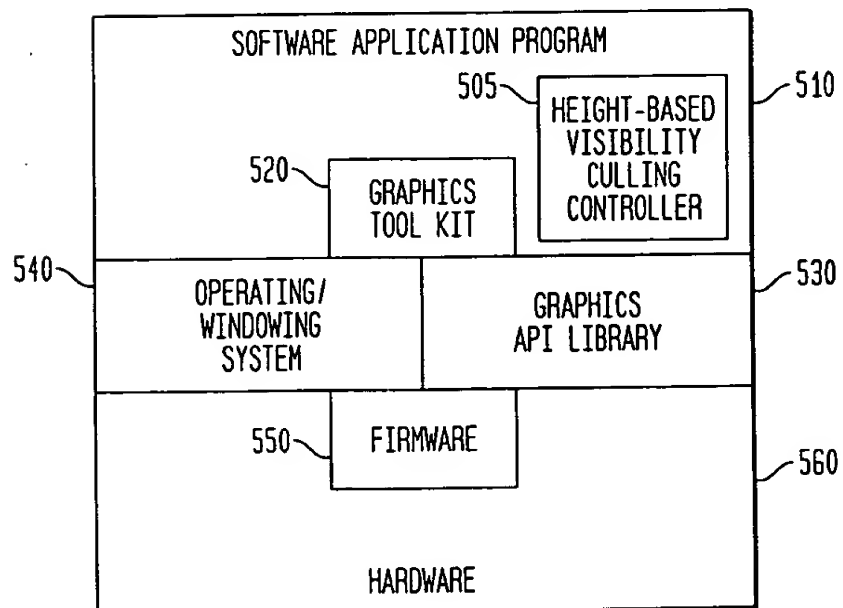


FIG. 6B

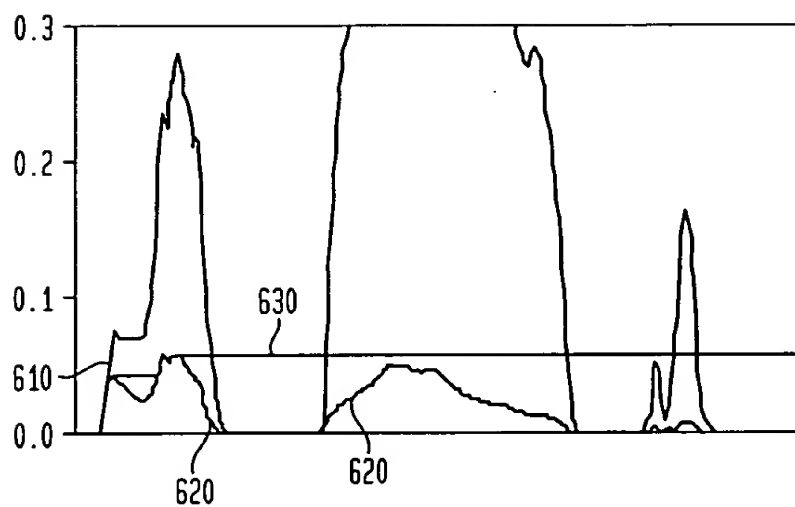
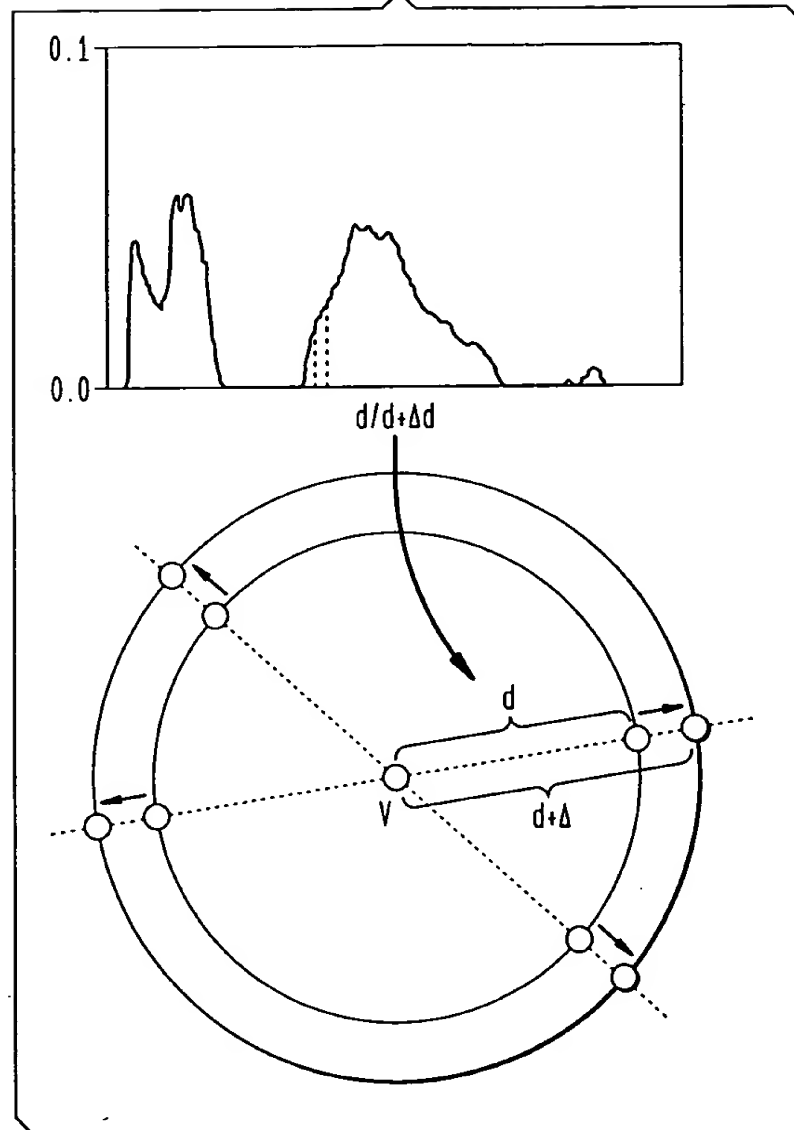
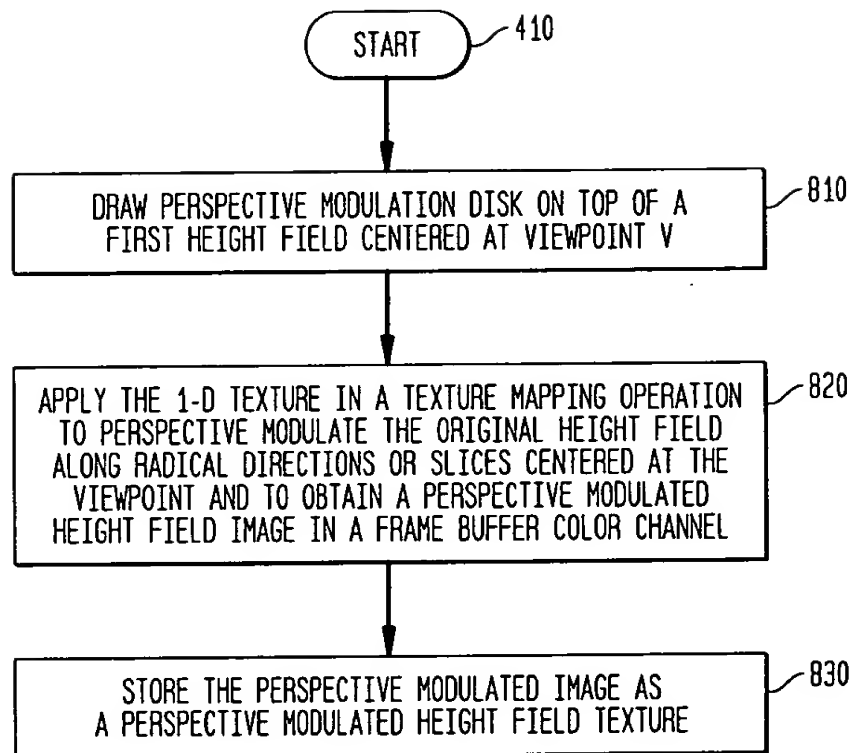


FIG. 7



00000000-00000000

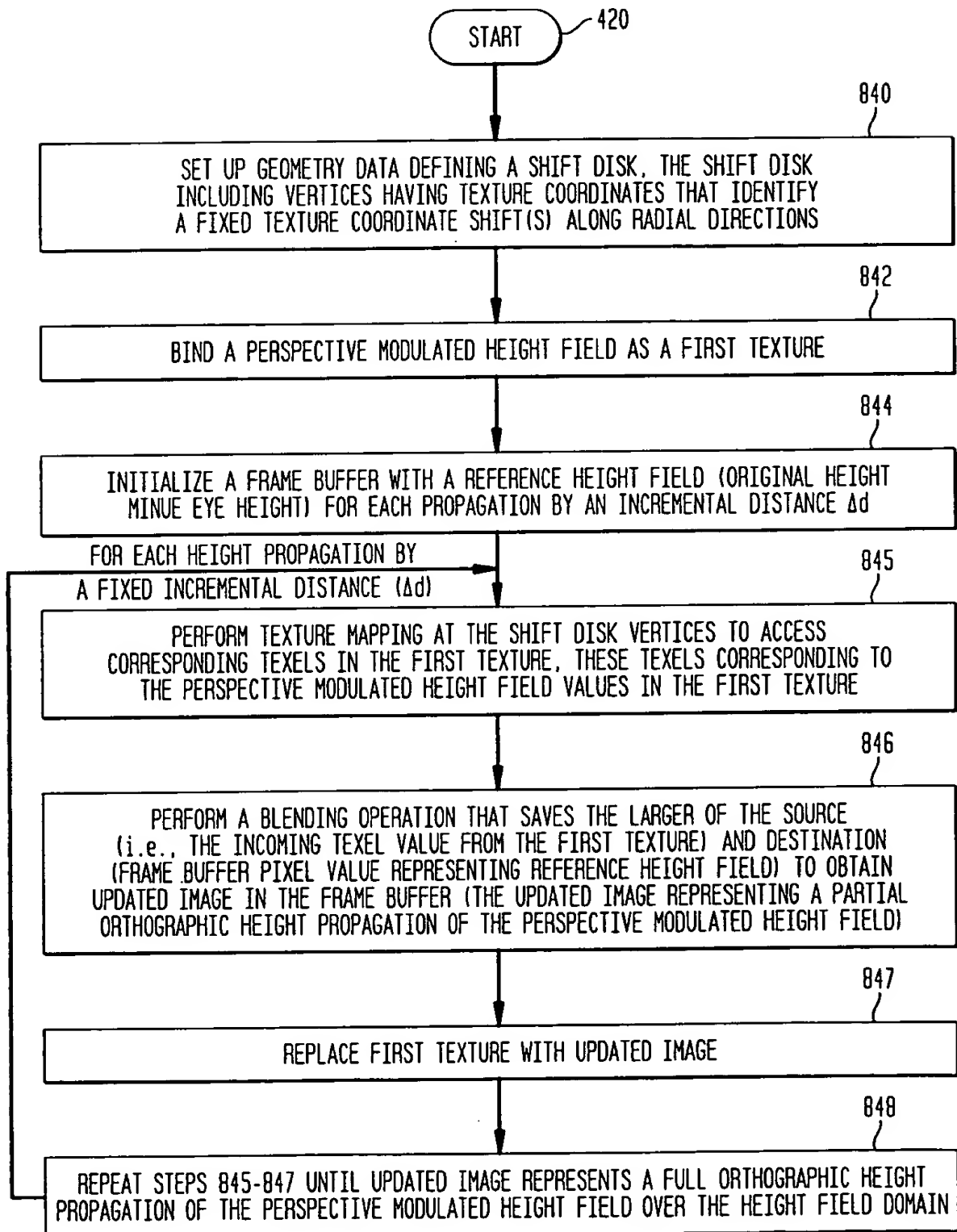
FIG. 8A



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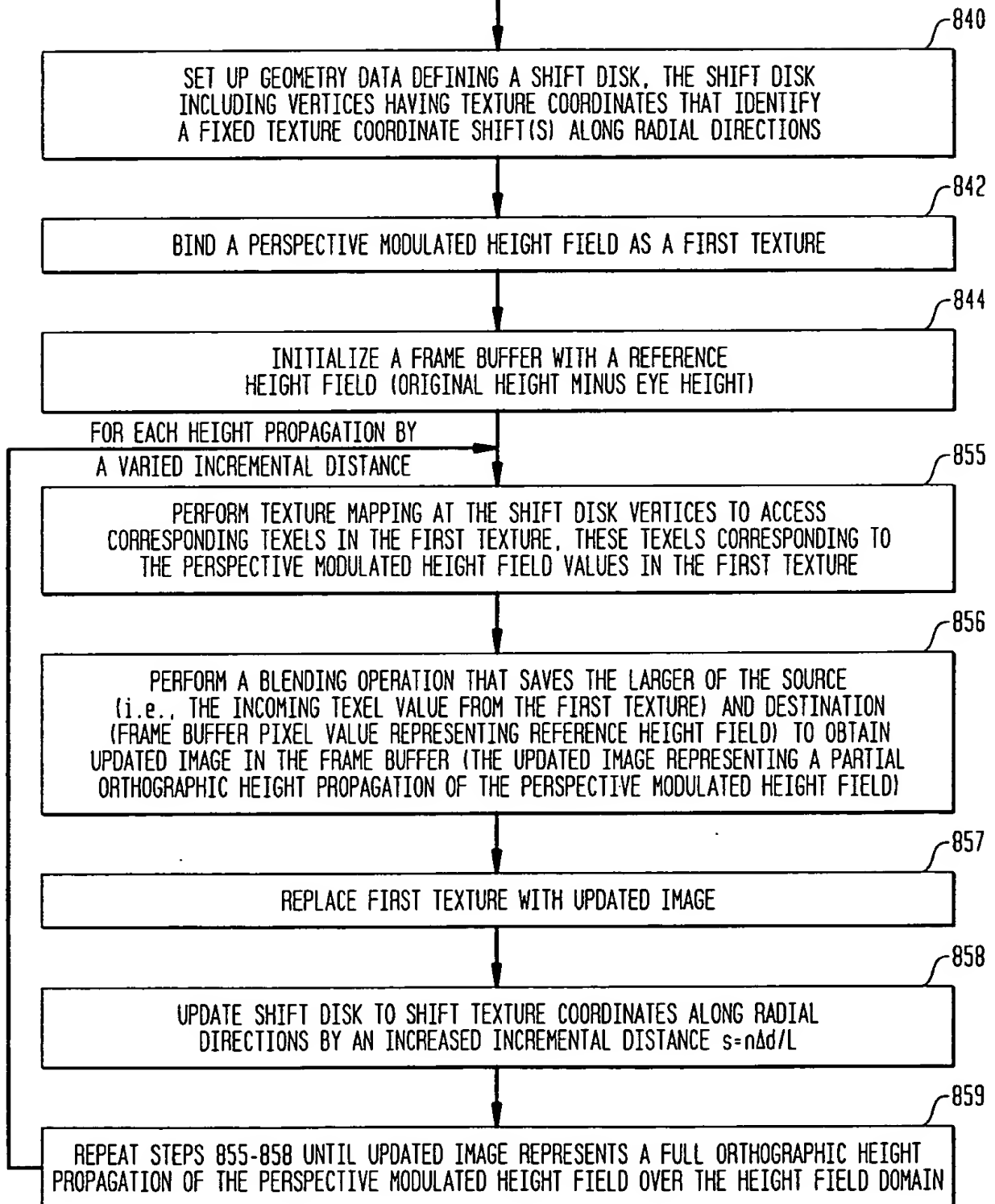
FIG. 8B

SHIFT DISK-HEIGHT PROPAGATION FIXED AT EACH ITERATION



[illegible]

START 420



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FIG. 8D

SHIFT TEXTURE-HEIGHT PROPAGATION FIXED AT EACH ITERATION

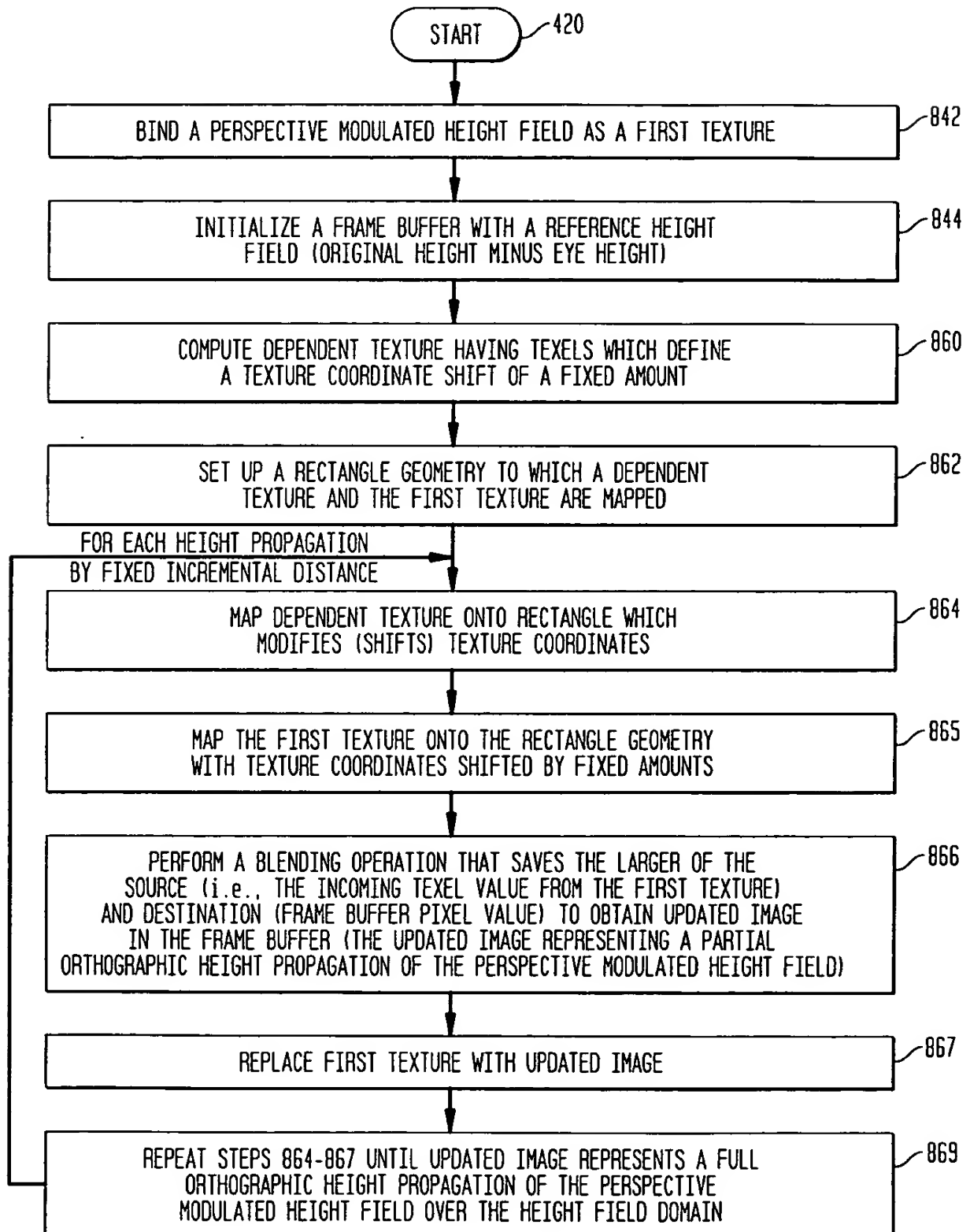
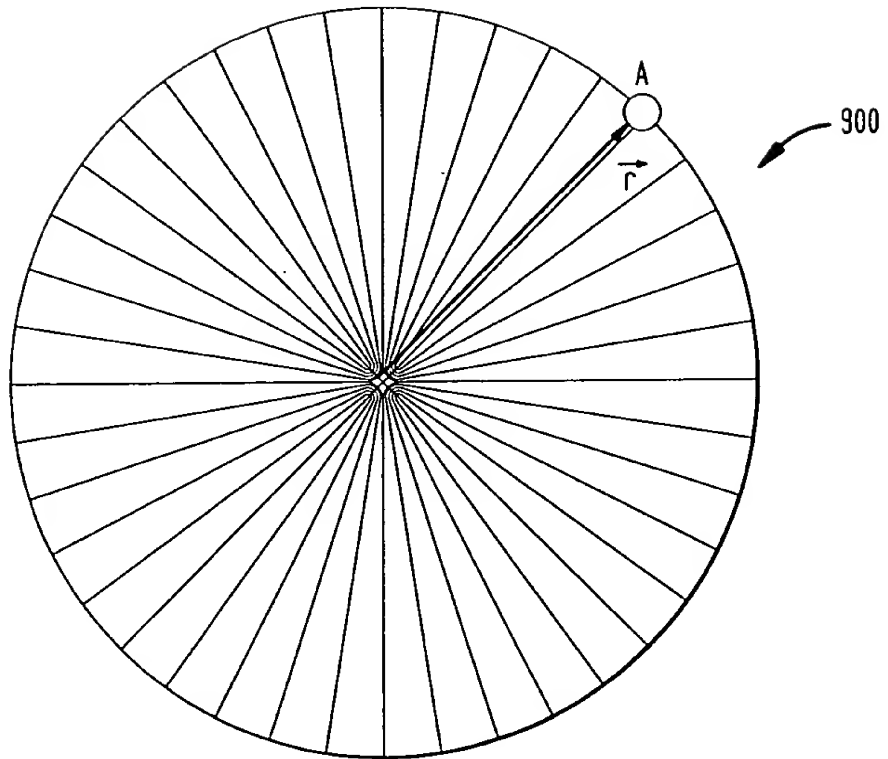
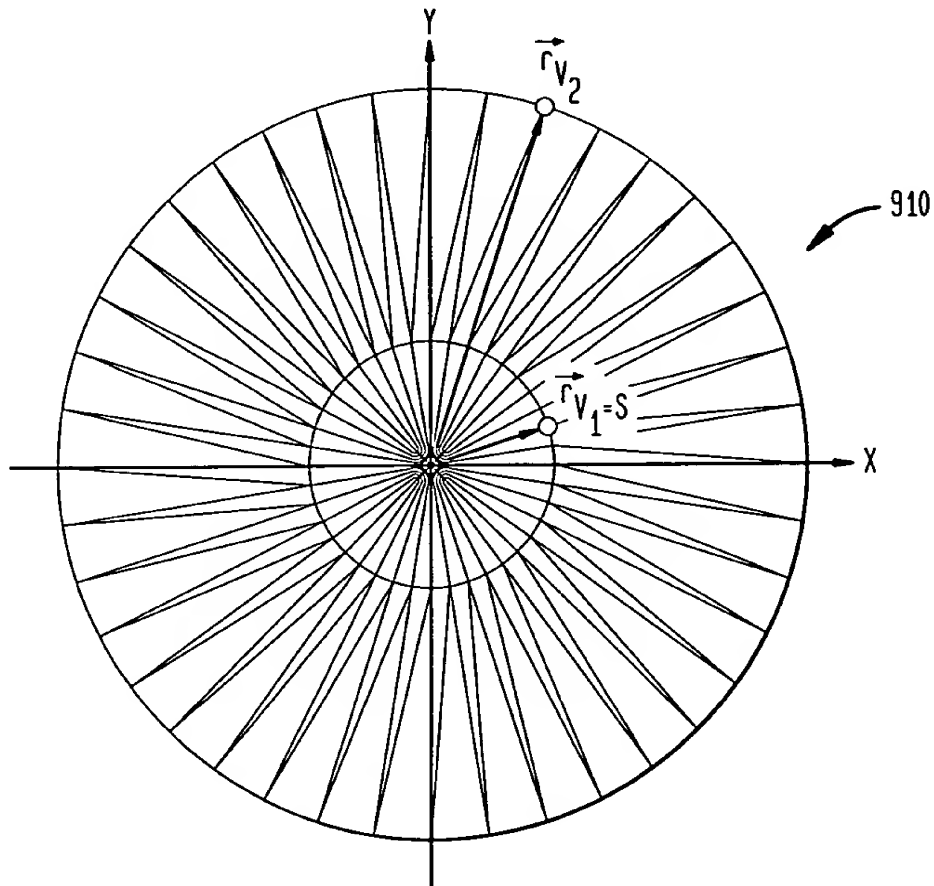


FIG. 9A



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FIG. 9B



V_1 's POSITION ($|\vec{r}_{V_1}| \cos \theta_{V_1}/2 + 0.5$, $|\vec{r}_{V_1}| \sin \theta_{V_1}/2 + 0.5$)

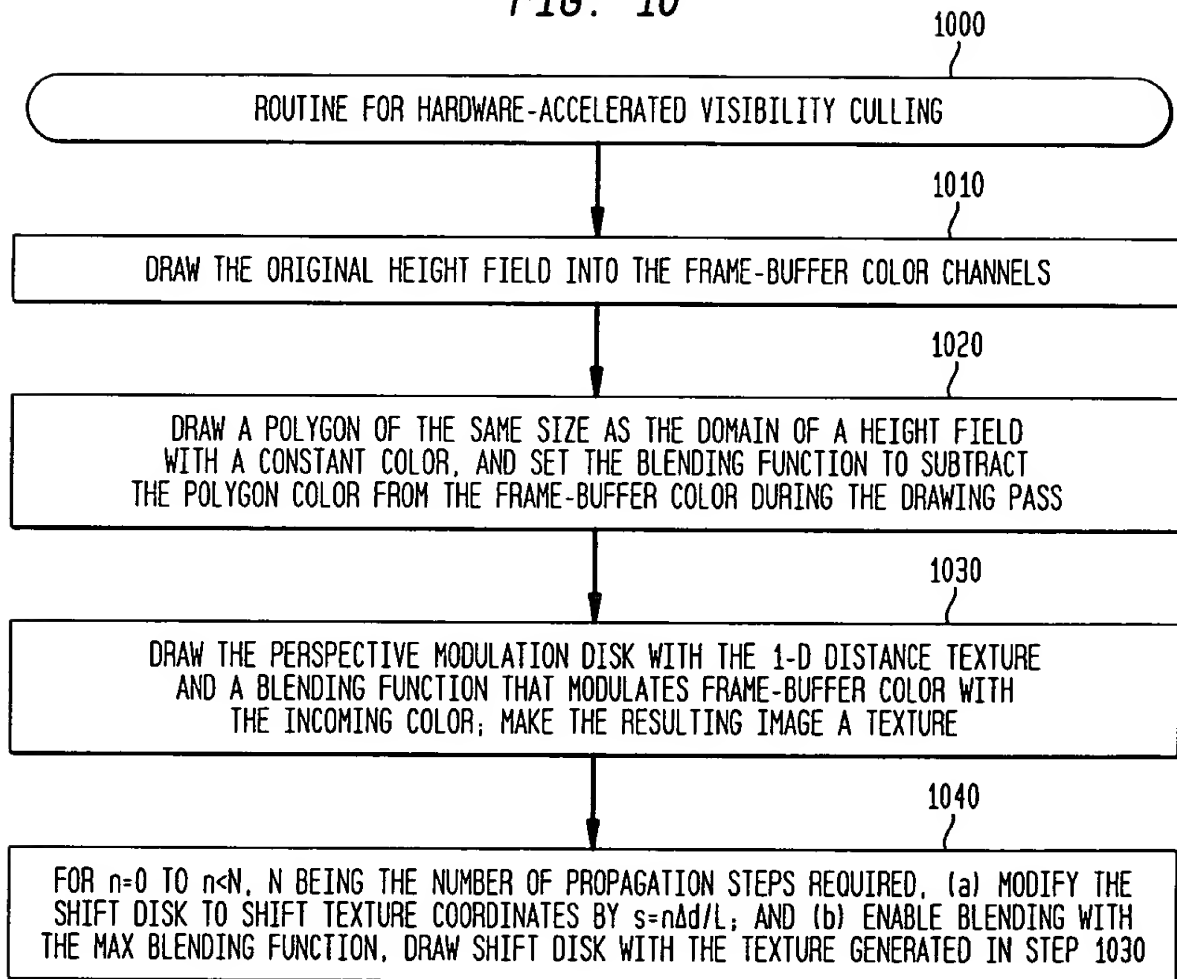
V_1 's TEXTURE COORDINATES: (0.5, 0.5) (SAME AS THE DISK CENTER)

V_2 's POSITION ($|\vec{r}_{V_2}| \cos \theta_{V_2}/2 + 0.5$, $|\vec{r}_{V_2}| \sin \theta_{V_2}/2 + 0.5$)

V_2 's TEXTURE COORDINATES: ($|\vec{r}_{V_2}| \cos \theta_{V_2}/2 + 0.5$, $|\vec{r}_{V_2}| \sin \theta_{V_2}/2 + 0.5$)

THE SHIFT DISK. V_1 REPRESENTS ANY VERTEX ON THE INNER RING, AND V_2 THAT OF THE OUTER. s IS THE AMOUNT OF SHIFT. RADIUS OF THE INNER RING IS s . θ IS THE ANGLE WITH THE X AXIS. A TRANSLATION TO THE EYE POSITION IS ADDED TO BOTH POSITIONS AND TEXTURE COORDINATES USING THE MODEL-VIEW AND THE TEXTURE MATRIX, RESPECTIVELY, WHEN THE DISK IS DRAWN.

FIG. 10



1110

1120

1130

1140

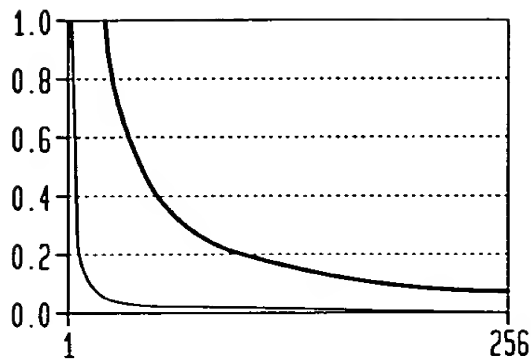
ORIGINAL

ORIGINAL -
EYE HEIGHT

PERSPECTIVE -
MODULATED (X4
FOR ILLUSTRATION
PURPOSES)

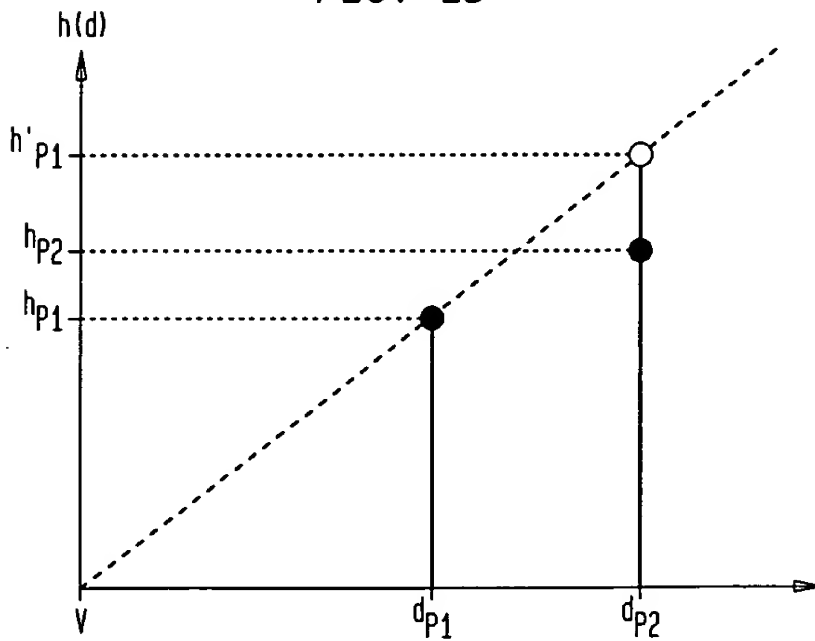
AFTER N STEPS
PROPAGATION (X4
FOR ILLUSTRATION
PURPOSES)

FIG. 12



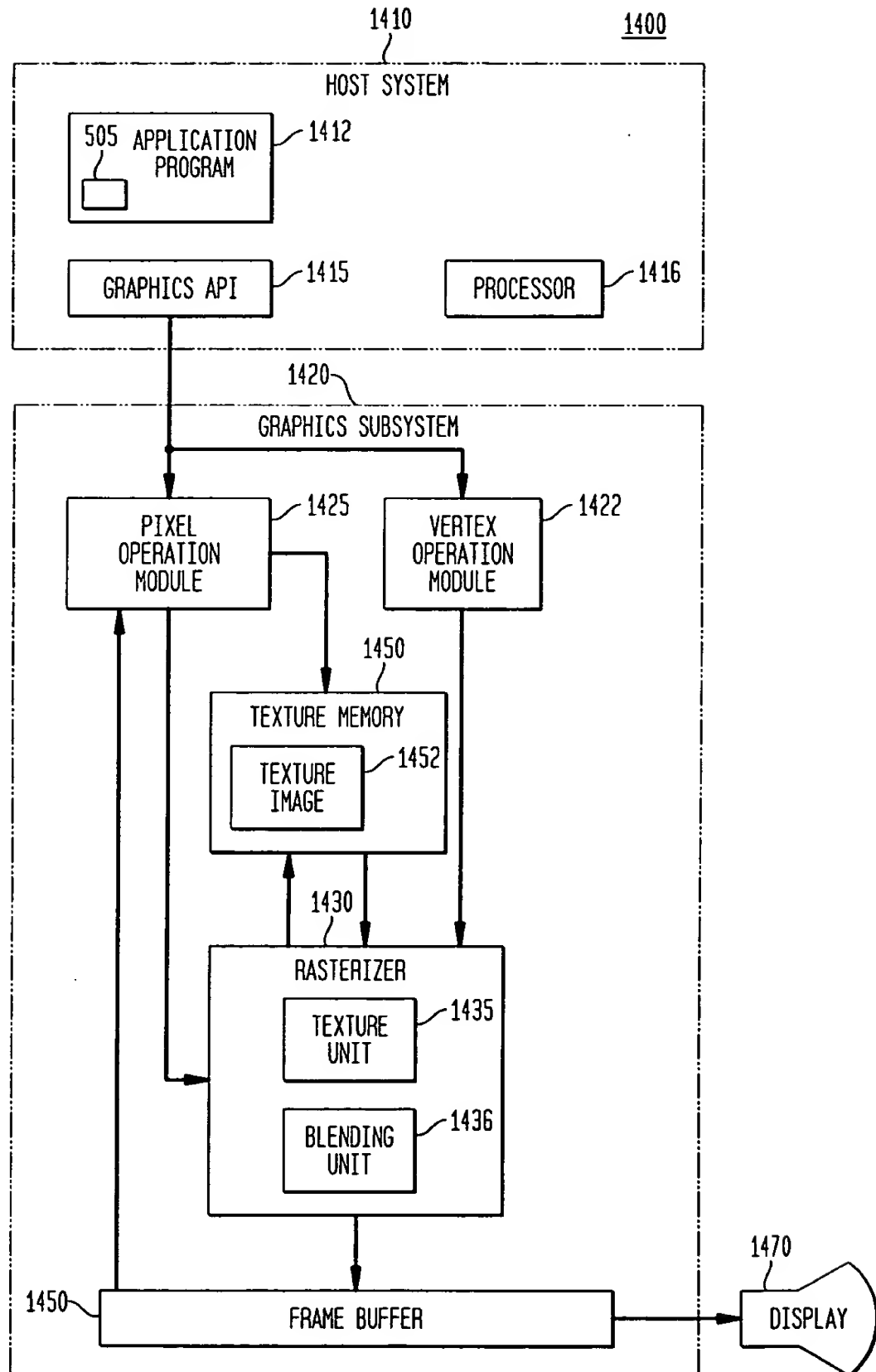
THE $1/d$ FUNCTION (THE THINNER LINE) AND THE SAME FUNCTION MULTIPLIED BY A FACTOR OF 20 (i.e., f_H 20). USING THE LATTER FOR PERSPECTIVE MODULATION RESULTS IN MORE USEABLE RANGE IN THE MODULATED HEIGHT FIELD AND THUS THE OCCLUSION HEIGHT FIELD DERIVED FROM IT.

FIG. 13



ORTHOGRAPHIC HEIGHT PROPOGATION ON A HEIGHT FIELD, AFTER
PERSPECTIVE MODULATION, IS EQUIVALENT TO PERSPECTIVE HEIGHT
PROPAGATION ON THE ORIGINAL HEIGHT FIELD

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FIG. 14



COMPUTER SYSTEM
1500

